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EXAMINER

YAO, SAMCHUAN CUA

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/749,461

Applicant(s)

COLLIER ET AL.

Examiner

Sam Chuan C. Yao

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20, 40, 41 and 58-69 is/are pending in the application.
- 4a) Of the above claim(s) 40 and 41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 58-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 60-63 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

While there is sufficient support in the original disclosure for a limitation of "a) the top side formation index ... 37.6 when the web has a bulk to about 0.1 inches ... **or b) the top side formation index ... 32.03 when the web has a bulk to about 0.1 inches**" (bold-face added), as far as the Examiner can tell, no express support can be found for the newly added limitation "a) the top side formation index ... 37.6 when the web has a bulk to about 0.1 inches ... **and b) the top side formation index ... 32.03 when the web has a bulk to about 0.1 inches**" (bold-face added) per claim 60, without any guidelines/guidance from Counsel/Applicant as to where support might be found, this engenders a New Matter situation. In fact, this may also give rise to a potential enablement problem, because it is unclear how one in the art wanting to practice applicant's invention form a nonwoven web which simultaneously have two different formation formation index averages

Art Unit: 1733

under the same condition. The limitations in claims 61-63 also engender a New Matter situation for the same reason as claim 60.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 59 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

Claim 59 is indefinite, because the phrase "the web side formation index" does not have a positive antecedent basis. For the purpose of examining this phrase, it is assumed that the phrase is referring to --the wire side formation index--.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 7 and 58-63 are rejected under 35 U.S.C. 102(e) as being anticipated by Panlanco et al (US 2003/0118816).

Panlanco et al discloses a process for making a high loft non-woven web. The process includes depositing an array of crimpable spun-bonded bi-component

Art Unit: 1733

filaments onto a forming surface; heating the deposited filaments to induce relaxation while controlling or minimizing forces which tend to impede crimping of the filaments so as to allow the filaments to crimp in the Z-direction with no more than non-functional bonding; cooling the heated filaments to below the temperature where fibers will bond to induce crimping in the Z-direction while controlling or minimizing forces which tend to impede crimping of the filaments to form a high loft fibrous web having crimped filaments; and through-air bonding the crimped filaments in the fibrous web to form the non-woven web (abstract; numbered paragraphs 8-10; 28-30; claims 15-16; 22).

With respect to claim 7, see numbered paragraph 8.

With respect to claim 58, see abstract and numbered paragraphs 28-30; figure 1.

With respect to claims 59-63, in light of the similarity between the claimed process and the process taught by Panlanco et al, the recited properties (i.e. the degree fiber web uniformity) of a finished web in these claims are taken to naturally flow from the teachings of Panlanco et al.

Note: Where ... the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. **Whether the rejection is based on "inherency" under 35 USC § 102, on prima facie obviousness" under 35 USC § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products."** In re Best, 562 F2d 1252, 1255, 195 USPQ 430, 433-4 (CCPA 1977).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 59-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panlanco et al (US US 2003/0118816) as applied to claim 1 above.

Note: these claims are taken to be anticipated by this reference. This is a back-up rejection in the event that Applicant is able to provide a clear and convincing evidence that the recited properties (i.e. web uniformity) are not inherent in the process of Panlanco et al.

These claims would have been obvious in the art, because one in the art would have determined, by routine experimentation, a suitable web formation index for the desired end-use of the finished high-loft web. All that would have been needed is to perform a routine task such as adjusting the operating parameters in the process of Panlanco et al.

9. Claims 1, 7-8, 14-15, 17-18, 20, 58-63, and 68-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terakawa et al (US 5,302,220) in view of WO 00/66057, and optionally as evidence from the teachings of Varona (US 5,679,042).

With respect to claims 1 and 69, Terakawa et al discloses a process for making a bulky spun-bonded non-woven fabric. The process includes depositing an array of bi-component filaments onto a forming surface to form a fibrous web; air-

blowing the web so that the fibers float and become free from being entangled in the forming surface; heating the air-blown web using a hot air where the fibers are permitted to develop crimps freely , wherein the fibers *"can be bonded and fixed together at their points of contacts"* (emphasis added); and then cooling the heated web to crimp the fibers in the web (col. 2 line 35 to col. 3 line 68; example 1). While Terakawa et al does not explicitly state that the fibers are heated to a *"temperature sufficient to induce a relaxation of molecular orientation of one side of the fiber"*, such is taken to naturally flow from the teachings of Terakawa et al. Otherwise, how would the *"composite fibers"* in the process of Terakawa et al shrink and crimp during the heating and cooling operations. Moreover, relaxation of oriented/drawn fibers by heating thereby inducing the fibers to shrink is a known natural characteristic of thermoplastic polymeric fibers as evidence from the teachings of Varona (col. 1 lines 7-17; col. 1 lines 44-51; col. 5 lines 21-50). Additionally, while Terakawa et al has not explicitly characterize a process of blowing a fiber web using an air stream blower as *"controlling or minimizing the forces which tend to impede crimping of fibers"*, this blowing operation is taken to naturally control or minimize the forces which tend to impede crimping of fibers as evidence from the following passages: *"... the fibers are prevented from being entangled in the net"* and *"... it is heat-treated to permit free development of crimps ..."*, and because this operation is expected to at least also spread/loosen the fibers within the web. It directly follows that, in light of the similarity of the

production process of Terakawa et al and the claimed invention, the fibers must naturally form crimp in the Z-direction in the process of Terakawa et al.

Terakawa et al differs from the claimed invention in that Terakawa et al does not teach non-functionally bonding fibers in a web during a 1st heating operation and does not also teach bonding a web after crimping the fibers. However, it is not critical in Terakawa et al to heat-bond fibers during a heat crimping operation as evidence from the following passage: the fibers *"can be bonded and fixed together at their points of contacts"* (emphasis added; col. 3 lines 46-51).

Moreover, non-functional bonding a deposited spun-bonded filamentary web using heated air to stabilize the web, where this web is later subjected to a finishing heat-bonding operation such as a TAB operation is an art recognized alternative effective way for bonding a spun-bonded web as exemplified in the teachings of WO '057. Absent any showing of unexpected benefit, since a preference on whether to heat-bond a deposited spun-bond filamentary web using a process suggested by Terakawa et al or to heat-bond them using an alternative heat-bonding operation such as the one disclosed by WO '057 is taken to be well within the purview of choice in the art, it would have been obvious in the art to non-functionally bond fibers in a web during a heat treatment operation (i.e. molecular orientation relaxation) and to later heat-bond the fibers to form a finished bonded non-woven web. None but only the expected result of crimping fibers in the web and bonding the web would have been achieved.

With respect to claim 7, while it is disclosed in the Terakawa et al patent for a density range of a finished high loft web to be 0.01-0.05 g/cm³(col. 3 lines 62-68), Terakawa et al is silent on the weight/area of the web. However, the recited weight/area would have been obvious in the art as such is conventional in the art in order to provide a desired amount fibers per unit area. Moreover, one in the art would have determined, by routine experimentation, to determine a suitable weight/area for the desired end-use of a resultant application.

With respect to claim 8, while Terakawa et al teaches using a finished high-loft web for facing layers of an absorbent article, Terakawa et al does not teach treating the web with a surfactant. However, such would have been obvious in the art because treating a fibrous topsheet for an absorbent article with a surfactant is an art recognized effective and yet a convenient way to reduce bodily fluid back-flow and also enhance the hydrophilicity of a fibrous web.

With respect to claims 14-15, 17-18 and 20, since: a) bonding a high loft fibrous web to an elastic filamentary web is an art recognized effective way for providing an elastic property to a finished web, claims 14-15 and 17-18 would have been obvious in the art. Moreover, since a fibrous web is commonly bonded in the art to a heat-retractable/shrinkable web in order to form a crimped laminate thereby creating an elastic laminate, claim 20 would have been obvious in the art.

With respect to claims 58-63, while Terakawa et al does not explicitly characterize the "working net conveyor" belt 4 (col. 2 lines 40-42) as a forming wire, such is nevertheless taken to be a forming wire. In any event, such would

have been obvious in the art as such is an art recognized effective forming surface for deposited arrays of spun-bonded filaments which are formed in-situ. As for the recited properties in claims 59-63, in light of the similarity between the claimed process and the process taught by Terakawa et al, the recited properties (i.e. the degree fiber web uniformity) of a finished web in these claims are taken to naturally flow from the teachings of In any event, these claims would have been obvious in the art, because one in the art would have determined, by routine experimentation, a suitable web formation index for the desired end-use of the finished high-loft web. All that would have been needed is to perform a routine task such as adjusting the operating parameters in the process of Terakawa et al.

With respect to claim 68, it is well known and conventional in the art to form white spun-bonded filaments. Incorporating titanium dioxide into a thermoplastic material in order to form white filaments is an art recognized effective way whiten the color of spun-bonded filaments. Moreover, one in the art would have determined a suitable amount of titanium dioxide in order to effectively form a desired whiteness on a finished spun-bonded web. For these reasons, this claim would have been obvious in the art.

10. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references set forth in numbered paragraph 6 or 9 as applied to claim 1, and further in view of Stokes et al (US 5,622,772).

Art Unit: 1733

Since pattern point bonding operations are art recognized effective alternative to through-air bonding (TAB) operation for heat-bonding a high loft web comprising crimped bi-component fibers as exemplified in the teachings of Stokes et al (abstract; col. 5 line 66 to col. 6 line 22; figures 2-3), it would have been obvious in the art to pattern bond a high loft web in a modified process of Terakawa et al or a process of Panlanco et al.

With respect to claim 3, providing a carrier web on an underside surface of a fibrous web is an art recognized effective way for giving support to a fibrous web so that the fibrous web is not damaged during handling and transport especially during transition between spaced conveyors. This is especially desirable for high-loft fiber web as it tends to be damaged during handling and transport. For this reason, this claim would have been obvious in the art.

With respect to claim 5, one in the art would have determined, by routine experimentation, to determine a suitable amount of pattern bonding surface area for the desired end-use of a resultant application. Moreover, the recited amount of pattern bonding surface area is conventional in the art in order to provide a desired bonding strength and loft to a finished web.

With respect to claim 6, spiral pattern bonding a fibrous web is an art recognized way for conveniently providing a patterned bonding to a fibrous web.

11. Claims 9-13, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references set forth in numbered paragraph 6 or 9 as applied to

Art Unit: 1733

claim 1, and further in view of Shelley et al (US 2002/0089079) and Kobylivker et al (US 6,072,005).

Since: a) depending on the desired end-use of a finished fibrous article, it is well known and conventional in the art to provide a preformed film to a lofty crimped fibrous web as exemplified in the teachings of Shelley (numbered paragraph 1 and numbered paragraph 55 last 7 lines), and b) Kobylivker et al discloses the desirability of bonding a fibrous web to an elastic microporous film to form a breathable and yet liquid impervious laminate (abstract; col. 2 lines 41-49; col. 3 lines 36-44; col. 4 line 50 to col. 5 line 4; figure 5), it would have been obvious in the art to bond an elastic microporous film to a high loft nonwoven web suggested by Terakawa et al or Panlanco et al.

12. Claims 64-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references set forth in numbered paragraph 6 or 9 as applied to claim 1, and further in view of Najour et al (US 6,379,136).

Since: a) conventionally formed spun-bonded filaments has a denier range of 2.5-12 as exemplified in the teachings of Najour et al (col. 2 lines 3-13), and b) it is well within the purview of choice in the art to choose a desired filament denier for the desired end-use and properties of a finished non-woven spun-bonded web, these claims would have been obvious in the art.

Double Patenting

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

Art Unit: 1733

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1-20 and 58-69 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/938,294 in view of WO 00/66057.

Panlanco et al, drawn to making a lofty fibrous web, substantially teaches the process recited in claim 1. While claim 1 in Panlanco et al requires heating crimpable bicomponents filaments "at time and a temperature sufficient to induce a relaxation of molecular orientation of at least one component of the" filaments, it is unclear whether this heating operation provides for "no more than a non-functional bonding of the fibers". However, such would have been obvious in the art as such is an art recognized way to stabilize a web to enable the web to be readily transported and handled for further processing without being substantially damaged as exemplified in the teachings of WO '057.

Art Unit: 1733

With respect to claims 2-20 and 58-69, these claims would have been obvious in the art for essentially similar line of reasonings set forth above.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

15. Applicant's arguments filed on 04-21-06 have been fully considered but they are not persuasive.

On page 7 last full paragraph, Counsel argued that the claimed invention requires "a non-functional bonding of the fibers during the crimping step", while Terakawa et al teaches heating fibers "to crimp and firmly bond the fibers in the same step". Examiner agrees. However, as noted above, it is not essentially to heat-bond fibers during the crimping operation in the process of Terakawa et al as evidence from the following passage: the fibers "can be bonded and fixed together at their points of contacts" (emphasis added). Moreover, non-functional bonding a deposited spun-bonded filamentary web using heated air to stabilize the web, where this web is later subjected to a finishing heat-bonding operation such as a TAB operation is an art recognized alternative effective way for bonding a spun-bonded web as exemplified in the teachings of WO '057. Absent any showing of unexpected benefit, since a preference on whether to heat-bond a deposited spun-bond filamentary web using a process suggested by Terakawa et al or to heat-bond them using an alternative heat-bonding operation such as the one disclosed by WO '057 is taken to be well within the purview of choice in the art, it would have been obvious in the art to non-functionally bond fibers in a

web during a heat treatment operation (i.e. molecular orientation relaxation) and to later heat-bond the fibers to form a finished bonded non-woven web. None but only the expected result of crimping fibers in the web and bonding the web would have been achieved.

As for Counsel's argument on page 8 full paragraph 2 regarding the Kobylivker patent, Counsel has basically reiterated the claimed limitations. For the same reasons set forth above, the recited limitations would have been obvious in the art.

As for Counsel's argument on page 8 last two full paragraphs regarding Polanco, Examiner strongly disagrees with Counsel's assertion that the limitations in claim 1 is not taught in Palanco. Counsel's attention is directed to numbered paragraph 2 above for details. It is strongly suggested for Counsel to particularly point out which limitation(s) in claim 1 which is/are not disclosed in Polanco et al.

As for Counsel's argument on page 9 regarding the double patenting rejection of the presently claimed invention, Examiner disagrees with Counsel's assertion that Examiner is "attempting to make an ordinary § 103 rejection combining several references". Counsel's attention is directed claims 1-25 of the Palanco et al patent. As noted above, claim 1 potentially differs from claims 1-25 in application '294 in that it is unclear whether this heating operation provides for "no more than a non-functional bonding of the fibers". However, such would have been obvious in the art as such is an art recognized way to stabilize a web to

enable the web to be readily transported and handled for further processing without being substantially damaged as exemplified in the teachings of WO '057.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richard Crispino can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
06-08-06